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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/864,297	05/25/2001	Jean-Luc Pastre	209019US2	1219
22850	7590	03/28/2005	EXAMINER	
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			YE, LIN	
			ART UNIT	PAPER NUMBER
			2615	
DATE MAILED: 03/28/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/864,297

Applicant(s)

PASTRE, JEAN-LUC

Examiner

Lin Ye

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 December 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 and 8-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 8-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-6 and 8-14 filed on 12/17/04 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
3. Claims 1-6 and 8-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ikeda et al. U.S. Patent 6,204,881 in view of Takiguchi et al. U.S. Patent 4,797,747.

Referring to claim 1, the Ikeda reference discloses in Figures, 1-2, 5, 12, 16 and 32-33, a device (an image data processing apparatus) to analyze a signal from a light source (In Figures 5 and 14A-D, analyze image signal density from a scene has illuminated by same light source with difference exposure setting, see Col. 8, lines 23-40), comprising means for separating the signal into at least two input signals (the image signal from the scene is separated into at least two input signals by a prism 102 for imaging sensing devices 103 and 104 as shown in Figures 12 and 16, see Col. 13, lines 35-40); at least two channels respectively possessing a gain and a dynamic range (e.g., two image devices 401a and 401b

in Figure 32 sensing the scene with different exposure amounts, so respectively possessing different gain and dynamic range, see Col. 26, lines 27-34 and lines 48-65), said channels are each configured to have at least one sensor (imaging sensing devices 103 and 104 in Figure 16 or image devices 401a and 401b in Figure 32, see Col. 16, lines 1-5), to generate at least one output signal with a first amplitude $A_{j1(i)}$ and second amplitude $A_{j2(i)}$ (signal amplitude as intensity or luminance levels), and a device configured to process the output signals, wherein the device configured to process includes a memory unit (See, Col. 27, lines 3-9) configured to store at least one of the first amplitude $A_{j1(i)}$ and second amplitude $A_{j2(i)}$ of the output signals is one of the output signals is below a threshold value (e.g., any saturated portions over the threshold must be deleted, see Col. 27, lines 35-40) and a determination unit configured to determine an amplitude of the signals from the light source (e.g., image combining unit 405 for combined image signals, the intensity levels equal to $IN(1) \times N1 + IN(2) \times N2$, see Col. 28, lines 20-29). However, the reference does not explicitly show the two channels having converter tubes that are configured to convert the input signal into an electron beam that impacts a screen and said sensor is configured to sense an image on the screen and generate the output signal.

The Takiguchi reference teaches in Figures 1 and 3, a streak camera device comprising two channels; wherein the two channels having two converter tubes (6-1 and 6-2, see Col. 4, lines 14-15) that converter tubes are configured to convert the input signal into an electron beam that impacts a screen (phosphor screen 66, see Col. 4, lines 9-10) and the sensors (image-pickup 92-1 and 92-2) is configured to sense an image on the screen and generated the output signal (See Col. 4, lines 21-29). The Takiguchi reference is evidence that one of

ordinary skill in the art at the time to see more advantages the device using at least two streak camera devices having streak tubes so that the device can measure the intensity distribution of a light emission more accurately even the whose wavelengths are outside particular wavelength region in which the photocathode of the streak tube is sensitive (See Col. 1, lines 65-67 and Col. 2, lines 1-3). For that reason, it would have been obvious to one of ordinary skill in the art to modify the device of Ikeda ('881) by providing the two channels of streak camera having converter tubes that are configured to convert the input signal into an electron beam that impacts a screen and the sensor is configured to sense an image on the screen and generate the output signals taught by Takiguchi ('747).

Referring to claim 2, the Ikeda and Takiguchi references disclose all subject matter as discussed in respected with same comment to claim 1, and the Ikeda reference discloses wherein the device works as follows: the device configured to stores the pair of values ($A_{j1(t)}$, t) (e.g., a dark image signal I which the brightness amplitude is smaller than the standard exposure image signal), where t is time, if the first amplitude is smaller than or equal to the threshold value; a device configured to store a pair of values ($A_{j2(t)}$, t) (e.g., a bright image signal II which the brightness amplitude is great than the standard exposure image signal), where t is time , if the second amplitude is greater than the threshold value; and a device configured to determine, from the stored values ($A_{j1(t)}$, t), ($A_{j2(t)}$, t) (the two image devices recoding image in a instant time concurrently for a scene), a corresponding values of amplitude of the signal from the light source (e.g., combined image intensity values, see Col. 27, lines 52-58) .

Referring to claims 3-4 (depend one of the claim 1 or claim 2), the Ikeda and Takiguchi references disclose all subject matter as discussed in respected with same comment to claims 1-2, and the Ikeda reference discloses wherein said means for separating the signal from the light source has an attenuation coefficient K (e.g., the luminance level adjusting factor K , see Col. 22, lines 5-17) determined so that K is smaller than or equal to the dynamic range (i.e., the K is smaller than or substantially equal to the dynamic rang as shown in Figure 26, and see Col. 22, lines 34-65) of at least one of said channels (image devices 401a, 401b).

Referring to claim 5 (depend one of the claim 1 or claim 2), the Ikeda and Takiguchi references disclose all subject matter as discussed in respected with same comment to claims 1-2, and the Takiguchi reference discloses wherein the sensors are streak cameras as shown in Figure 1 (see Col. 3, lines 43-50).

Referring to claim 6 (depend one of the claim 1 or claim 2), the Ikeda and Takiguchi references disclose all subject matter as discussed in respected with same comment to claims 1-2, and the Ikeda reference discloses the device comprising n (two or three) channels having a dynamic range (brightness-dark range), where n is an integer, and $(n-1)$ means for separating the signal (by the prism 102) as shown in Figures 12 and 16.

Referring to claim 8, the Ikeda and Takiguchi references disclose all subject matter as discussed in respected with same comment to claim 1.

Referring to claim 9, the Ikeda and Takiguchi references disclose all subject matter as discussed in respected with same comment to claim 8, and the Ikeda reference discloses wherein the signal from a light source is into several signals, wherein the steps of claim 8 are

reiterated for each of the separated signals (each of the image devices are CCD, the CCD devices repeat to capture image in a plurality times inherently).

Referring to claim 10 (depend on the claim 8 or claim 9), the Ikeda and Takiguchi references disclose all subject matter as discussed in respected with same comment to claims 8-9, and the Ikeda reference discloses wherein the threshold value (saturation level, see Col. 27, lines 35-40) corresponds to the value of saturation of the sensor with the smallest dynamic range.

Referring to claim 11 (depend one of the claim 8 or claim 9), the Ikeda and Takiguchi references disclose all subject matter as discussed in respected with same comment to claim 8-9, and the Takiguchi reference discloses wherein the sensors are streak cameras as shown in Figure 1 (see Col. 3, lines 43-50).

Referring to claim 12 (depend one of the claim 8 or claim 9), the Ikeda and Takiguchi references disclose all subject matter as discussed in respected with same comment to claims 8-9, and the Takiguchi reference discloses wherein the signal from the light source corresponds to a projection of a signal laser beam through a slot (4-0) as show in Figure 1.

Referring to claim 13 (depend one of the claim 8 or claim 9), the Ikeda and Takiguchi references disclose all subject matter as discussed in respected with same comment to claims 8-9, and the Takiguchi reference discloses wherein the signal is a linear image coming from a spectrometer or a section of a physical phenomenon (See Col. 1, lines 11-15).

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4. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ikeda et al. U.S. Patent 6,204,881 in view of Takiguchi et al. U.S. Patent 4,797,747 and Gallegos et al. U.S. Patent 5,166,598.

Referring to claim 13 (depend one of the claim 8 or claim 9), the Ikeda and Takiguchi references disclose all subject matter as discussed in respected to claims 8-9, except that the both references do not show the signal from a light source is a signal formed by a row of optic fibers.

The Gallegos reference teaches in Figure 1, a streak camera device can use a different type of light source and or different type optics such as optic fiber or laser light beam (54, See Col. 8, lines 21-28). The Gallegos reference is evidence that one of ordinary skill in the art at the time to see more advantages the light source is optic fiber, each of the fibers producing a signal so that significantly increase timing measurement accuracy and ease of the streak camera device (See Col. 8, lines 30-35). For that reason, it would have been obvious to one of ordinary skill in the art to modify the device of Ikeda ('881) by providing the signal from a light source is a signal formed by a row of optic fibers as taught by Gallegos ('598).

Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
 - a. Koishi U.S 5,043,584 discloses a photo-counting type streak camera device have two channels.
 - b. Sano et al. U.S. 6,111,980 discloses a synthesized picture signal of a dynamic image that produced by combining a low luminance and a high luminance picture signals.
7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lin Ye whose telephone number is (571) 272-7372. The examiner can normally be reached on Mon-Fri 8:00AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James J. Groody can be reached on (571) 272-7950. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


James J. Groody
Supervisory Patent Examiner
Art Unit 262-2615

Lin Ye
March 22, 2005